DOI: 10.1007/s003440010017

Author Index to Volume 19, 2000

Amanuma, M., see Yoshihara, T., et al. 457

Aswathanarayan, G., see Bais, H. P., et al. 238

Bais, H. P., Sudha, G. S., Aswathanarayan, G.: Putrescine and Silver Nitrate Influence Shoot Multiplication, *In Vitro* Flowering, and Endogenous Titers of Polyamines in *Cichorium intybus* L. cv. Lucknow local 238

Barker, S. J., Tagu, D.: The Roles of Auxins and Cytokinins in Mycorrhizal Symbioses 144

Bird, D. M., Koltai, H.: Plant Parasitic Nematodes: Habitats, Hormones, and Horizontally-acquired Genes 183

Blancaflor, E. B.: Cortical Actin Filaments Potentially Interact with Cortical Microtubules in Regulating Polarity of Cell Expansion in Primary Roots of Maize (*Zea mays* L.) 406

Bohanek, J. R., see Groninger, J. W. 453

Bohnert, H. J., Cushman, J. C.: The Ice Plant Cometh: Lessons in Abiotic Stress Tolerance 334

Bradshaw, H. D., Jr., Ceulemans, R., Davis, J., Stettler, R.: Emerging Model Systems in Plant Biology: Poplar (*Populus*) as a Model Forest Tree 306

Ceulemans, R., see Bradshaw, H. D., Jr., et al. 306

Chatterjee, A., Roux, S. J.: *Ceratopteris richardii*: A Productive Model for Revealing Secrets of Signaling and Development 284

Cove, D.: The Moss, *Physcomitrella patens* 275

Crespi, M., Gálvez, S.: Molecular Mechanisms in Root Nodule Development 155

Croxdale, J.: Message from the Incoming Editor 1

Cushman, J. C., see Bohnert, H. J. 334

Davenport, T. L., Pearce, D. W., Rood, S. B.: Correlation of Endogenous Gibberellic Acid with Initiation of Mango Shoot Growth 445

Davis, J., see Bradshaw, H. D., Jr., et al. 306

Dumais, J., Serikawa, K., Mandoli, D. F.: *Acetabularia*: A Unicellular Model for Understanding Subcellular Localization and Morphogenesis during Development 253

Dumais, J., Steele, C. R.: New Evidence for the Role of Mechanical Forces in the Shoot Apical Meristem 7

Fraschina, A. A., see Sozzi, G. O., et al. 359

Gálvez, S., see Crespi, M. 155

Gladish, D. K., Sutter, E. G., Rost, T. L.: The Role of Free Indole-3-acetic Acid (IAA) Levels, IAA Transport, and Sucrose Transport in the High Temperature Inhibition of Primary Root Development in Pea (*Pisum sativum* L. cv. Alaska) 347

Granier, C., Turc, O., Tardieu, F.: Co-Ordination of Cell Division and Tissue Expansion in Sunflower, Tobacco, and Pea Leaves: Dependence or Independence of Both Processes? 45

Groninger, J. W., Bohanek, J. R.: Effects of Diquat Applied to Exposed Roots of Black Willow 453

Groot, E. P., Meicenheimer, R. D.: Comparison of Leaf Plastochron Index and Allometric Analyses of Tooth Development in *Arabidopsis thaliana* 77

Hasenstein, K. H., see Zhang, N. 397

Hasenstein, K. H.: The Cytoskeleton: Problems, Paradigms and Prospects 369

Hejnowicz, Z., Rusin, A., Rusin, T.: Tensile Tissue Stress Affects the Orientation of Cortical Microtubules in the Epidermis of Sunflower Hypocotyl 31

Hirsch, A. M., McFall-Ngai, M. J.: Fundamental Concepts in Symbiotic Interactions: Light and Dark, Day and Night, Squid and Legume 113

Ichihara, A., see Yoshihara, T., et al. 457

Jiang, Y., Joyce, D. C., Macnish, A. J.: Effect of Abscisic Acid on Banana Fruit Ripening in Relation to the Role of Ethylene 106

Joyce, D. C., see Jiang, Y., et al. 106

Kachman, S. D., see Kefi, S., et al. 429

Kapchina-Toteva, V., van Telgen, H.-J., Yakimova, E.: Role of Phenylurea Cytokinin CPPU in Apical Dominance Release in *In Vitro* Cultured *Rosa hybrida* L. 232

Kefi, S., Pavlista, A. D., Read, P. E., Kachman, S. D.: Comparison of Thidiazuron and Two Nitroguanidines to Kinetin on Potato Microtuberization in vitro under Short and Long Days 429

Keyes, J. W., O'Malley, R. C., Kim, D., Lynn, D. G.: Signaling Organogenesis in Parasitic Angiosperms: Xenognosin Generation, Perception, and Response 217

Kim, D., see Keyes, J. W., et al. 217

King, R. W., Seto, H., Sachs, R. M.: Response to Gibberellin Structural Variants Shows that Ability to Inhibit Flowering Correlates with Effectiveness for Promoting Stem Elongation of Some Plant Species 437

Kirk, D. L.: *Volvox* as a Model System for Studying the Ontogeny and Phylogeny of Multicellularity and Cellular Differentiation 265

Klink, V. P., Wolniak, S. M.: The Efficacy of RNAi in the Study of the Plant Cytoskeleton 371

Koltai, H., see Bird, D. M. 183

Leung, D. W. M., see Li, M. 423

Lev-Yadun, S., Sederoff, R.: Pines as Model Gymnosperms to Study Evolution, Wood Formation, and Perennial Growth 290

Li, M., Leung, D. W. M.: Starch Accumulation Is Associated with Adventitious Root Formation in Hypocotyl Cuttings of *Pinus radiata* 423

Lintilhac, P. M., Wei, C., Tanguay, J. J., Outwater, J. O.: Ball Tonometry: A Rapid, Nondestructive Method for Measuring Cell Turgor Pressure in Thin-Walled Plant Cells 90

Lynn, D. G., see Keyes, J. W., et al. 217

Macnish, A. J., see Jiang, Y., et al. 106

Mandoli, D. F., Olmstead, R.: The Importance of Emerging Model Systems in Plant Biology 249

Mandoli, D. F., see Dumais, J., et al. 253

Matsuura, H., see Yoshihara, T., et al. 457

McFall-Ngai, M. J., see Hirsch, A. M. 113

Meicenheimer, R. D., see Groot, E. P. 77

Moulia, B.: Leaves as Shell Structures: Double Curvature, Auto-Stresses, and Minimal Mechanical Energy Constraints on Leaf Rolling in Grasses 19

Muday, G. K.: Maintenance of Asymmetric Cellular Localization of an Auxin Transport Protein through Interaction with the Actin Cytoskeleton 385

Musgrave, M. E.: Realizing the Potential of Rapid-Cycling *Brassica* as a Model System for Use in Plant Biology Research 314

Nakamori, K., see Yoshihara, T., et al. 457

Nasrallah, M. E.: *Arabidopsis* Species Hybrids—Emerging Model Systems for the Analysis of Species Differences 326

O'Malley, R. C., see Keyes, J. W., et al. 217

Ogata, K.: The Double-Water-Film Electrode: A Device for Measuring the Resistance and the Capacitance of the Internode/Node Interface of *Chara* as Functions of Time and Temperature 98

Ohmori, F., see Yoshihara, T., et al. 457

Olmstead, R., see Mandoli, D. F. 249

Oosterhuis, D. M., see Zhao, D. 415

Outwater, J. O., see Lintilhac, P. M., et al. 90

Paiva, N. L.: An Introduction to the Biosynthesis of Chemicals Used in Plant - Microbe Communication ... 131

Pavlista, A. D., see Kefi, S., et al. 429

Pearce, D. W., see Davenport, T. L., et al. 445

Read, P. E., see Kefi, S., et al. 429

Rood, S. B., see Davenport, T. L., et al. 445

Rost, T. L., see Gladish, D. K., et al. 347

Roux, S. J., see Chatterjee, A. 284

Rusin, A., see Hejnowicz, Z., et al. 31

Rusin, T., see Hejnowicz, Z., et al. 31

Sachs, R. M., see King, R. W., et al. 437

Schurr, U., see Walter, A., et al. 65

Sederoff, R., see Lev-Yadun, S. 290

Serikawa, K., see Dumais, J., et al. 253

Seto, H., see King, R. W., et al. 437

Silk, W. K., see Walter, A., et al. 65

Silk, W. K.: In Tribute to Paul Green 2

Sozzi, G. O., Trinchero, G. D., Fraschina, A. A.: Ethylene and Glycosidase Promotion in GA_3- and IAA-treated Tomato Fruit (*Lycopersicon esculentum* Mill.) 359

Steele, C. R., see Dumais, J. 7

Stettler, R., see Bradshaw, H. D., Jr., et al. 306

Sudha, G. S., see Bais, H. P., et al. 238

Sutter, E. G., see Gladish, D. K., et al. 347

Tagu, D., see Barker, S. J. 144

Tanguay, J. J., see Lintilhac, P. M., et al. 90

Tardieu, F., see Granier, C., et al. 45

Trinchero, G. D., see Sozzi, G. O., et al. 359

Tsutsumi, T., see Yoshihara, T., et al. 457

Turc, O., see Granier, C., et al. 45

Turzanska, M., see Zagórska-Marek, B. 55

van Telgen, H.-J., see Kapchina-Totiva, V., et al. 232

Wall, L. G.: The Actinorhizal Symbiosis 167

Walling, L. L.: The Myriad Plant Responses to Herbivores 195

Walter, A., Silk, W. K., Schurr, U.: Effect of Soil pH on Growth and Cation Deposition in the Root Tip of *Zea mays* L. 65

Wei, C., see Lintilhac, P. M., et al. 90

Wolniak, S. M., see Klink, V. P. 371

Yakimova, E., see Kapchina-Totiva, V., et al. 232

Yoshihara, T., Ohmori, F., Nakamori, K., Amanuma, M., Tsutsumi, T., Ichihara, A., Matsuura, H.: Induction of Plant Tubers and Flower Buds under Noninducing Photoperiod Conditions by a Natural Product, Theobroxide 457

Zagórska-Marek, B., Turzanska, M.: Clonal Analysis Provides Evidence for Transient Initial Cells in Shoot Apical Meristems of Seed Plants 55

Zhang, N., Hasenstein, K. H.: Halogenated Auxins Affect Microtubules and Root Elongation in *Lactuca sativa* 397

Zhao, D., Oosterhuis, D. M.: Pix Plus and Mepiquat Chloride Effects on Physiology, Growth, and Yield of Field-Grown Cotton 415

DOI: 10.1007/s003440010018

Subject Index to Volume 19, 2000

Abiotic stress tolerance ... 334
Abscisic acid ... 106
AC239,604 ... 429
AC243,654 ... 429
Acetabularia acetabulum ... 253
Actin ... 371, 406
Actin cytoskeleton ... 385
Actin filaments ... 406
Actinorhizal symbiosis ... 167
Adventitious root formation ... 423
Alkaloi ... 131
Allium cepa L. ... 90
Allometric analysis ... 77
α- and β-galactosidase ... 359
α-L-arabinofuranosidase ... 359
1-Aminocyclopropane-1-carboxylate synthase (ACC-S) ... 359
Amphiploid species ... 326
Angiosperms ... 217
Anguina ... 183
Animal-microbe interaction ... 113
Apical dominance ... 232
Arabidopsis ... 326
Arabidopsis lyrata ... 326
Arabidopsis thaliana ... 77, 326
Arabis ... 326
Arbuscular mycorrhiza ... 144
Asymmetric cellular localization ... 385
Auxin ... 144, 397, 445
Auxin efflux carrier complex ... 385
Auxin transport ... 385

BA ... 232
Banana ... 106
Bauplan ... 253
Benzoquinones ... 217
Biomechanics ... 19, 31
Biophysics ... 19
Biosynthesis ... 131
Black willow ... 453
Brassica oleracea ... 314
Brassica rapa ... 314
Breaker tomato ... 359
Bryophytes ... 275
Bud break ... 445
Bud sprouting ... 232

Calcium ... 65
CAM pathway induction ... 334
Cation deposition ... 65
Cell content feeders ... 195
Cell division ... 45
Cell elongation ... 406
Cell expansion ... 406
Cell polarity ... 284
Cellular differentiation ... 265
Cellular processes ... 253
Ceratodon purpureus ... 275
Ceratopteris richardii ... 284
Chara ... 98
Chewing insects ... 195
Chlamydomonas ... 265
Chlorophyta ... 253
Cichorium intybus L. cv. Lucknow local ... 238
Clonal analysis ... 55
CO_2 exchange rate ... 415
Columbia-1 ... 77
Common ice plant ... 334
Cortical microtubules ... 31, 406
Cotton ... 415
CPPU ... 232
Crassulacean acid metabolism (CAM) ... 334
Cytodifferentiation ... 253, 265
Cytokinin ... 144, 183, 232
Cytoskeletal function ... 369
Cytoskeletal gene products ... 371
Cytoskeleton ... 371, 385

Dasycladales ... 253
Defense gene activation ... 195
Development ... 253
5,6-Dichloroindole-3-acetic acid ... 397
Dicotyledonous ... 45
Diquat ... 453
Double-water-film electrode ... 98
Drainage systems ... 453

Ectomycorrhiza ... 144
Editorial ... 1
Education ... 314
Electrical properties ... 98
Elicitors ... 195
Elongation ... 397, 437
Embryo development ... 385
ENOD40 gene ... 144, 155
Epidermis ... 31
Ethylene ... 106, 195
Ethylene biosynthesis ... 359
Euprymna scolopes ... 113
Evolution ... 265
Evolutionary tree ... 249

Expressed sequence tag 284, 334
Extracellular matrix 265

F-actin 385
Fern gametophytes 284
Flower buds 457
Flowering 437
Fluorochrome-conjugated phalloidin-labeling method ... 406
Forest biotechnology 290
Forest genetics 306
Forest tree 306
Frankia 167
Fruit ripening 106, 359
Fuchsia hybrida 437
Functional genomics 334

GA_3 ..... 359, 437
Gall 183
Gametophyte development 275, 284
Gene expression 195, 217, 334
Gene tagging 275
Gene targeting 275
Gene transfer model 183
Genetic analysis 290
Genetics 306
Genome evolution 326
Genome sequencing 334
Genomics 290, 306, 334
Germ-soma division of labor 265
Giant cell 183
Gibberellin 437
Gibberellic acid 359, 445
Glycosidase activity 359
Gonidia 265
Gossypium hirsutum 415
Grasses 19
Gravitational biology 314
Gravity responses 284
Gravity vector 385
Green algae 265
Green, Paul 2
Gymnosperms 290

Halogenated auxin 397
Haustorial development 217
Helicoidal wall 31
Herbicide 453
Herbicide resistance 314
Herbivore defenses 314
Heterodera 183
Homeostatic control 98
Homologous recombination 275
Horizontal gene transfer 183
Host-symbiont interactions 167
Hydroxyproline-rich glycoproteins 265
Hypocotyl cuttings 423

IAA 347, 359
Ice plant 334
In vitro flowering 238
Indole-3-acetic acid 347, 359, 397
Indole-3-butyric acid 397, 423
Initial cells 55
Initial impermanence 55
Intercellular communication 98
Interspecific hybridization 326

Jasmonic acid 195

Kinematic analyses 45
Kinetin 423, 429
KNOX 183

Lactuca sativa 397
Lasiodiplodia theobromae 457
Latrunculin B 406
Leaf development 45
Leaf growth 77
Leaf plastochron index 77
Leaf rolling 19
Leaf starch content 415
Legume 113
Life cycle 253, 265, 275
Lint yield 415
Lycopersicon esculentum Mill. cv. Bonanza 359

Magnesium 65
Mangifera indica 445
Marsilea vestita 371
Mechanical buckling 7
Mechanical energy 19
Mechanical stress 31
Meloidogyne 183
Mepiquat chloride 415
Meristems 7, 55
Mesembryanthemum crystallinum 334
1-Methylcyclopropene 106
Microtubules 397, 406
Model systems .. 249, 253, 265, 284, 290, 306, 314, 326, 334
Moore, Thomas 1
Morphogenesis 19, 253
Moss 275
Multicellularity 265
Municipal sewers 453
Mycorrhizal symbioses 144

N-1-Naphthylphthalamic acid 397
Natural products 131

Nematodes ... 183
Nin transcription factor ... 155
Nitrogen fixation ... 167
Nitroguanidines ... 429
Nod factors ... 155
Nodulation ... 155
Nodulin genes ... 155
Nuclear behavior ... 253
Nutrient responses ... 314
Nutrients ... 65

Oil seed ... 314
Ontogeny ... 265
Organogenesis ... 217
Osmotic pressure ... 90

Parasitic angiosperms ... 217
Parasitic nematodes ... 183
Pathogenesis-related proteins ... 195
Pathogens ... 314
Pea leaves ... 45
Pea root inhibition ... 347
Perennial growth ... 290
pH ... 65
Phalloidin ... 406
PHAN ... 183
Pharbitis nil ... 437, 457
Phaseolus vulgaris L. ... 90
Phenylpropanoid ... 131
Phenylurea (CPPU) ... 232
Phloem-feeding insects ... 195
Photoassimilate translocation ... 415
Photoperiod ... 8, 12, 429, 457
Phylogeny ... 249, 253, 265, 284, 326
Physcomitrella patens ... 275
Physiology ... 306, 314, 334
Phytoalexin ... 131
Phytohormones ... 144, 183
Pine cones ... 290
Pinus ... 290
Pinus radiata ... 423
Pisum sativum L. cv. Alaska ... 347
Pix Plus ... 415
Plant biology research ... 314
Plant development ... 326
Plant growth ... 90
Plant height ... 415
Plant physiology ... 306, 314, 334
Plant reproduction ... 290
Plant tubers ... 457
Plant-animal interaction ... 131
Plant-microbe interaction ... 113, 131, 155, 167, 217
Plant-plant interaction ... 131
Plasmodesma(ta) ... 98
Poacae ... 19
Polarity ... 385, 406
Polyacetate ... 131
Polyamines ... 238
Populus ... 306
Potassium ... 65
Potato microtuber formation ... 457
Potato microtuberization ... 429
Pressure probe ... 90
Pressurized shell ... 7
Primary root development ... 347
Primary roots ... 406
Primordium initiation ... 7
Protonemal tissue ... 275
Purine (BA) ... 232
Putrescine ... 238

Quiescent center ... 397

Rapid cycling ... 314
Regulatory genes ... 155
Reproductive cycle ... 290
Reproductive root growth ... 445
Research applications ... 314
Respiration ... 106
Rhizobium ... 113
RNA interference (RNAi) ... 371
Root control ... 453
Root elongation ... 397
Root formation ... 423
Root growth ... 65, 397
Root morphology ... 144
Root nodule development ... 155, 167
Root-symbiont interactions ... 144, 155
Rosa hybrida L. cv. Madelon ... 232
Rose hybrida L. cv. Motrea ... 232

Salicylic acid ... 195
Salix nigra ... 453
Salt tolerance ... 334
Secondary metabolite ... 131
Sepiolid ... 113
Serrate ... 77
Shell structures ... 19
Shoot apical meristems ... 7, 55
Shoot growth ... 445
Shoot multiplication ... 238
Signal transduction ... 217, 284, 334
Signal transduction pathway ... 155, 195
Silver nitrate ... 238
Solarnum tuberosum ... 457

Somatic cells 265
Space biology 314
Spathiphyllum "Petite" 437
Species differences 326
Species hybrids 326
Spermidine 238
Spermine 238
Starch 423
Stem elongation 437
Step tip growth 445
Stolon 429
Stress anisotropy 31
Stress-induced transcripts 334
Stress tolerance 314, 334
Striga asiatica 217
Sucrose 423
Sucrose transport 347
Sugar 423
Sunflower capitulum 7
Sunflower hypocotyl 31
Sunflower leaves 45
Symbiosis 113, 144, 155, 167
Syncytium 183

Taxol 406
Temperature 98, 347
Terpenoid 131
Theobroxide 457
Thidiazuron 429
Time 98
Tissue expansion 45
Tissue stress 7, 31
Tobacco leaves 45
Tonometry 90
Tooth development 77
Transformation 275, 284
Transport 347
Tree development 306
Tree physiology 306
Tree root obstruction 453
4,4,4-Trifluoro-3-(indole-3-) butyric acid 397
Tuber initiation 429
Tubulin 371
Turgor pressure 90

Ulvophyceae 253
Unicellular model 253
Uronic acid 65

Vegetative root growth 445
Vibrio fischeri 113
Volatiles 195
Volvocine algae 265
Volvox carteri 265

Water fern 371
Wood formation 290
Wound response pathway 195

Xenognosin 217
Xylogenesis 290

Zea mays L. 65, 5